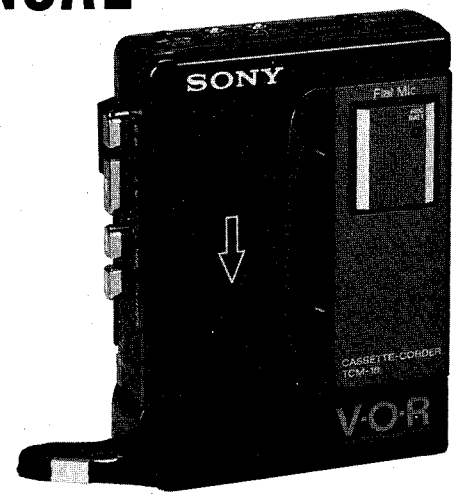
TCM-18V

SERVICE MANUAL

AEP Model



SPECIFICATIONS

Recording system . . . . . 2-track 1-channel monaural
Frequency response 100-8,000Hz
Speaker . . . . . Approx. 3.6cm ($1\,^{7}/_{16}$ inches) dia.
Power output (DC) . . . . . 350mW (at 10% harmonic distortion)
Input . . . . . Microphone input jack (minijack) sensitivity 0.2mV for 3kΩ or lower impedance microphone.
Output . . . . . Earphone jack (minijack) for 8-300Ω earphone
Power requirements . . . . . 3V DC, two R6 (size AA) batteries
DC IN 3V jack accepts:
- Sony AC-D2M AC power adaptor (optional) . . . . . 220V AC, 50Hz
- Sony DCC-70 car battery cord (optional) for use on 12V car battery.

Battery life (hours)

Battery	Recording
Sony battery SUM-3 (NS)	Approx. 2.5 hours
Sony alkaline battery AM3 (N)	Approx. 7 hours

Dimensions . . . . . Approx. 91 × 119.2 × 38.3mm (w/h/d) ($3\,^{5}/_{8} \times 4\,^{3}/_{4} \times 1\,^{9}/_{16}$ inches) incl. projecting parts and controls
Weight . . . . . Approx. 260g (9.2oz) incl. batteries
Supplied accessories . . . . Carrying case (1)

Design and specifications subject to change without notice.

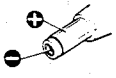
Model Name Using Similar Mechanism Set	TCM-25 TCM-27
Tape Transport Mechanism Set	MT-18-06

FEATURES

- **VOR system** economizes tapes, batteries and playback time.
- **Quick review function** to hear the just recorded sound.
- **Sony Boundary Effect system** to pick up the speaker's voice more clearly at the conference.

What is VOR (Voice Operated Recording) System?
With this system, recording starts only when the sound is picked up and stops automatically when the sound is no longer detected.

Note: If an AC power adaptor or a car battery cord not manufactured by Sony is used, a fuse must be installed in the AC power adaptor or the car battery cord and the polarity of the plug must be as illustrated.



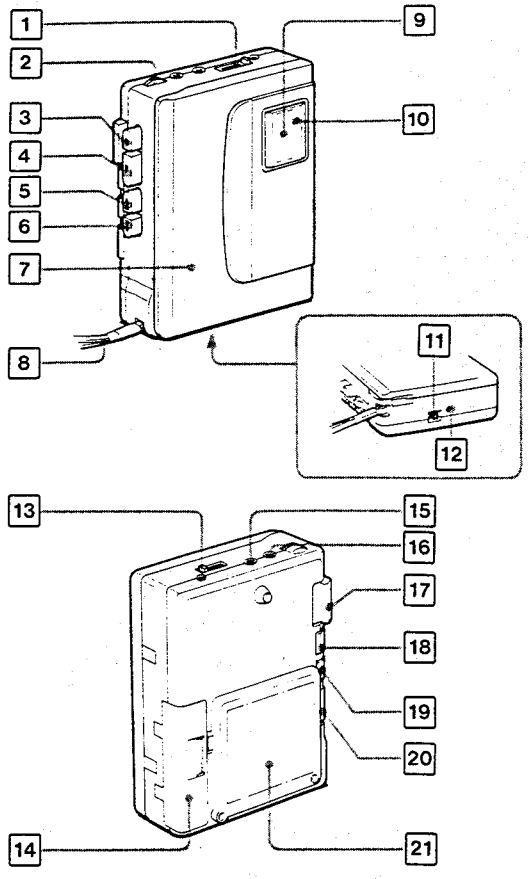
Polarity of Sony plug

MICROFILM

CASSETTE-CORDER
SONY®

SECTION 1
GENERAL

PARTS IDENTIFICATION



1. COUNTER and reset button
   For indexing the tape contents. Before recording, push the reset button to set the COUNTER to "000".
2. VOLUME/VOR SENS (Voice operated recording sensitivity) 4 ~ 10 control
3. ● REC (recording) button
4. ▼ PLAY (playback) button
5. ▲ REW (rewind)/REVIEW button
6. ▼ FF (fast forward)/CUE button
7. Cassette compartment
8. Handstrap
9. Flat Mic (built-in microphone)
10. REC/BATT (recording/battery) indicator
11. TONE/MIC SENS (L/H) switch
12. DC IN 3V (external power input) jack
13. REMOTE jack
    Pause or the other function will be operated when using this unit connected to an optional foot switch. But in this case, PAUSE switch on the unit cannot be operated.
14. Battery compartment
15. MIC (PLUG IN POWER) jack
16. EAR (earphone) jack
17. ■≙ STOP/EJECT button
18. VOR (Voice Operated Recording) (ON/OFF) switch
19. PAUSE switch
20. SPEED CONTROL (SLOW/NORM/FAST) switch
21. Speaker

FLEXIBLE CIRCUIT BOARD REPAIRING

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

NOTES ON CHIP COMPONENT REPLACEMENT

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SECTION 2
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head — pinch roller
   erase head — rubber belts
   capstan — idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
6. Power supply voltage : 3V dc.

Torque Measurement

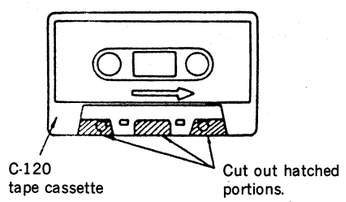
Torque	Meter Reading	Torque Meter
Forward	22−45g•cm (0.31−0.62oz•inch)	CQ-102C
Fast Forward and Rewind	50−100g•cm (0.69−1.39oz•inch)	CQ-201B
Back Tension	1.5−3.5g•cm (0.02−0.05oz•inch)	CQ-102C

Tape Tension Measurement

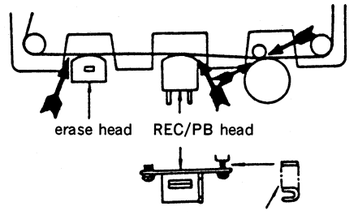
Meter	Meter Reading
CQ-403A	more than 110g (3.88oz)

Head Height Adjustment

1. Prepare an adjustment cassette as shown below.



2. In record mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at portions of arrow.



Part No.	t
3-578-138-01	0.1
3-578-138-11	0.2
3-578-138-21	0.3

SECTION 3
ELECTRICAL ADJUSTMENTS

3-1. TAPE RECORDER SECTION

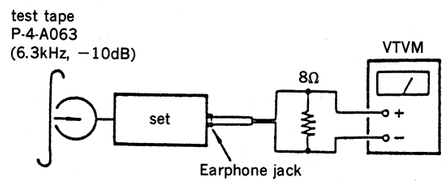
• Test Tape

Type	Signal	Used for
WS-48A	3kHz, 0dB	tape speed adjustment
P-4-A063	6.3kHz, −10dB	head azimuth adjustment

REC/PB Head Azimuth Adjustment

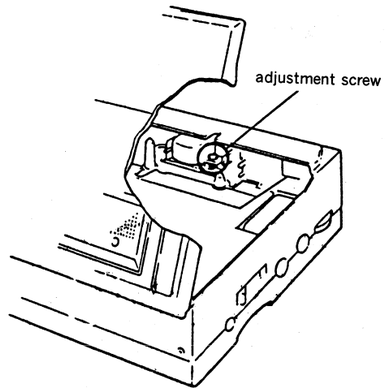
Procedure :

1. Mode : playback



2. Turn the adjustment screw to obtain the maximum reading on VTVM.
   Note : Several peaks may appear, but take the maximum
3. After the adjustment, lock the adjustment screw with suitable locking compound.

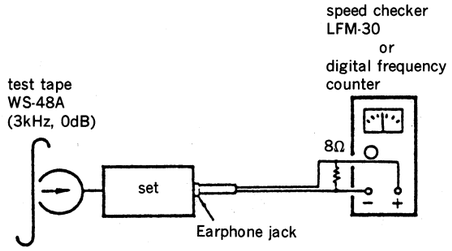
Adjustment Location :



Tape Speed Adjustment

Procedure :

Mode : playback

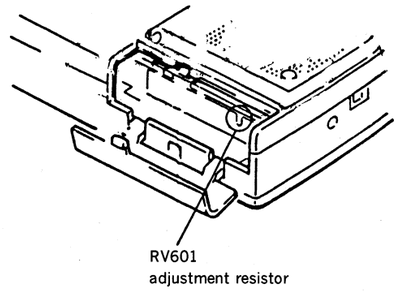


Adjustment Value :

Speed checker	Digital frequency counter
±1%	2,970−3,030Hz

Frequency difference between the beginning and the end of the tape should be within 1% (30Hz).

Adjustment Location :

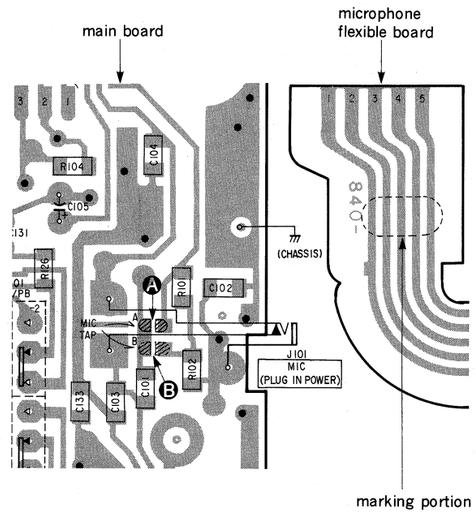


Microphone Sensitivity Adjustment

When replacing the microphone, perform this adjustment.

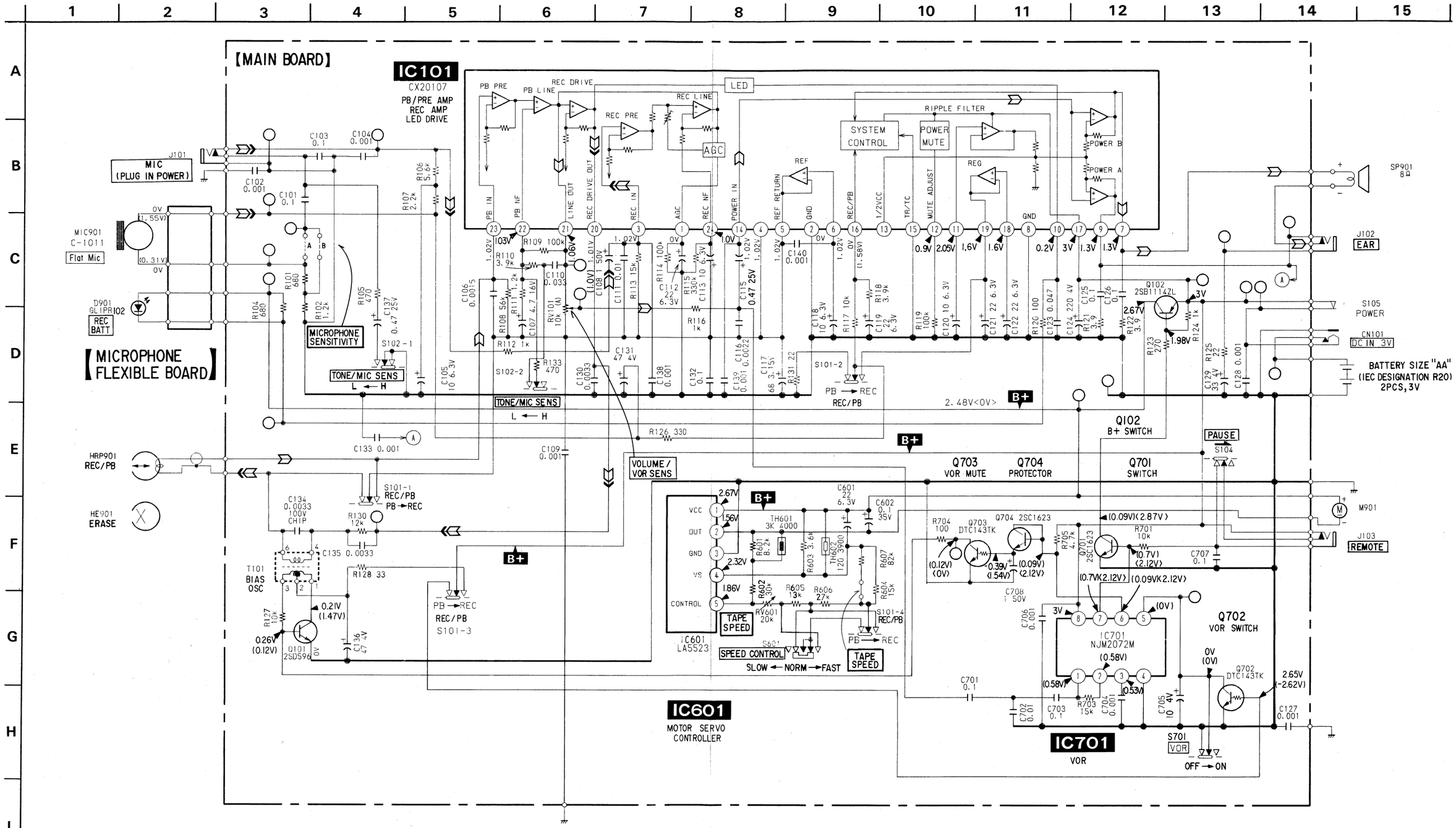
Mark of microphone flexible board	Pattern connection
With black marking	Ⓐ
Without black marking	Ⓑ

Adjustment Location : main board



SECTION 4
DIAGRAMS

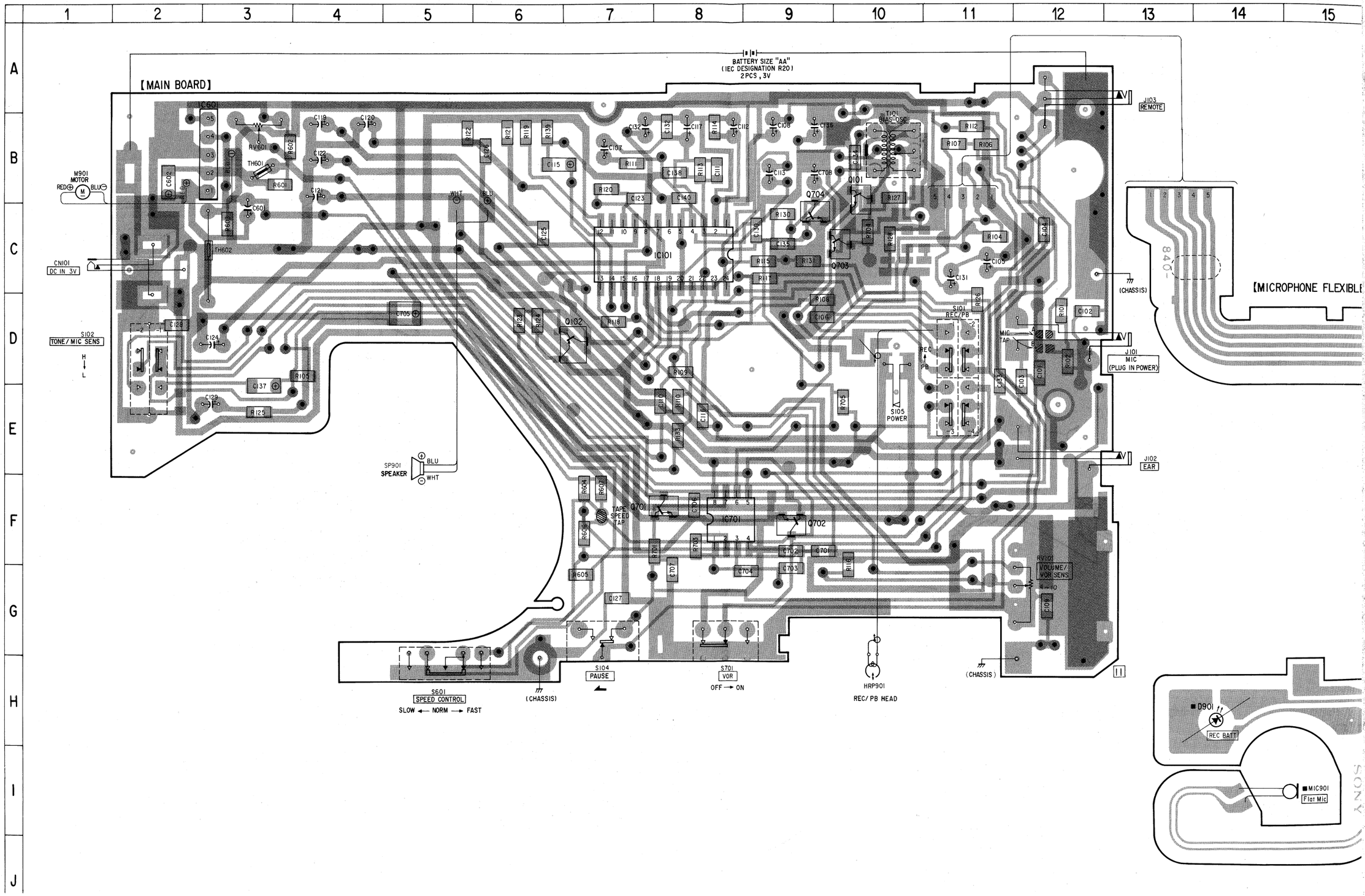
4-1. SCHEMATIC DIAGRAM

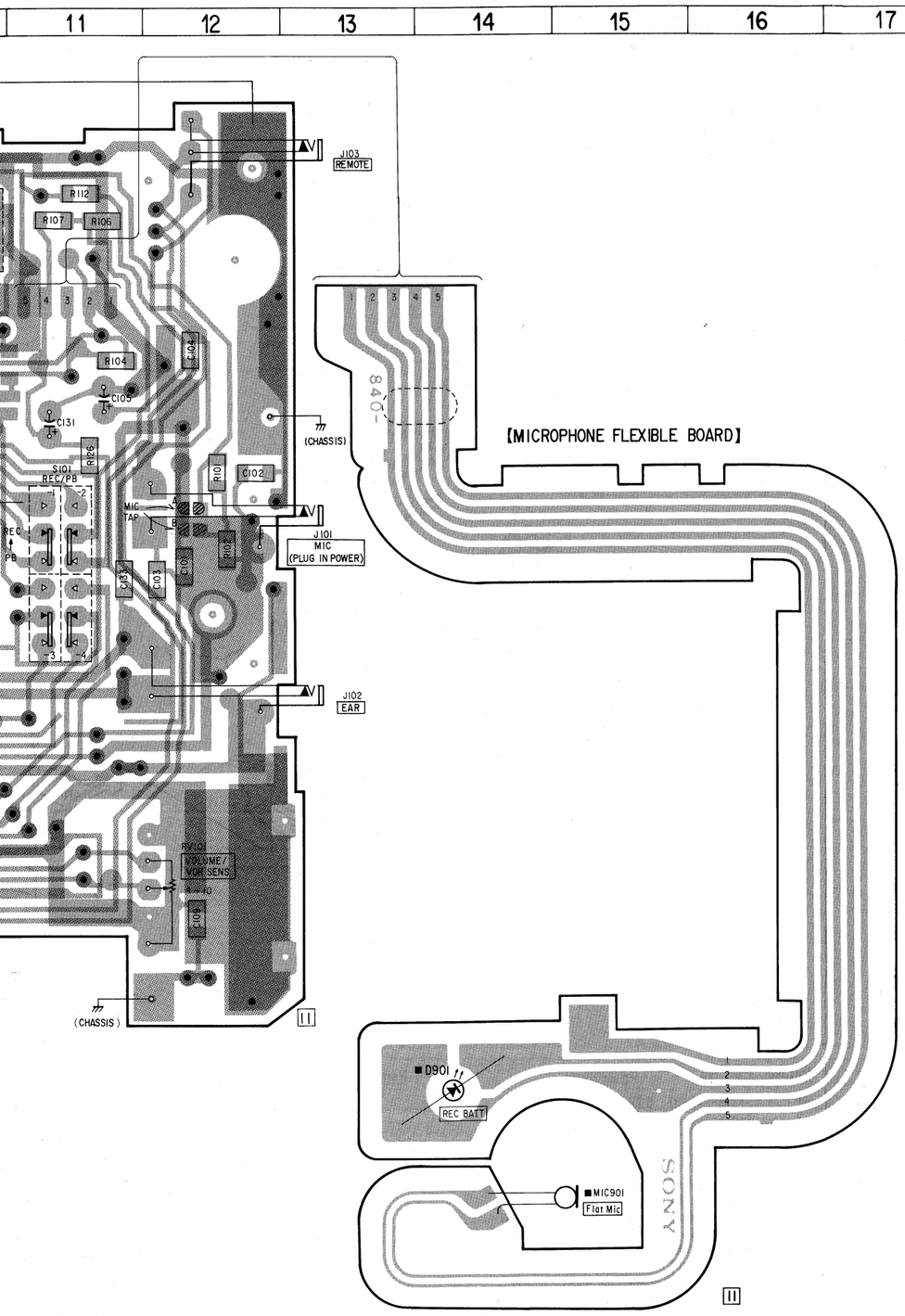


Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : adjustment for repair.
- Power voltage is dc 3V and fed with regulated dc power supply from external power voltage jack.
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PB
  ( ) : REC
  < > : PAUSE
- Signal path.
  ▷ : PB
  ▷▷ : REC

4-2. PRINTED WIRING BOARDS





• Semiconductor Location

Ref. No.	Location
D901	H-14
IC101	C-8
IC601	B-3
IC701	F-8
Q101	B-10
Q102	D-7
Q701	F-8
Q702	F-9
Q703	C-10
Q704	C-9

• Semiconductor Lead Layouts

GL-1PR102

Note:

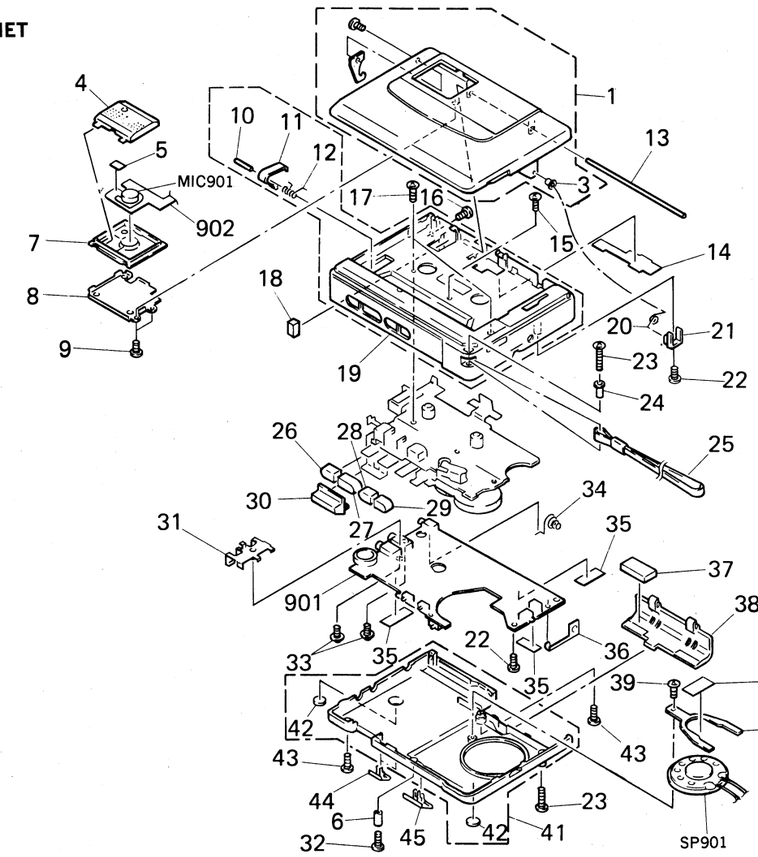
- ——— : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- ⊡ indicates side identified with part number.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.

SECTION 5
EXPLODED VIEWS

NOTE:

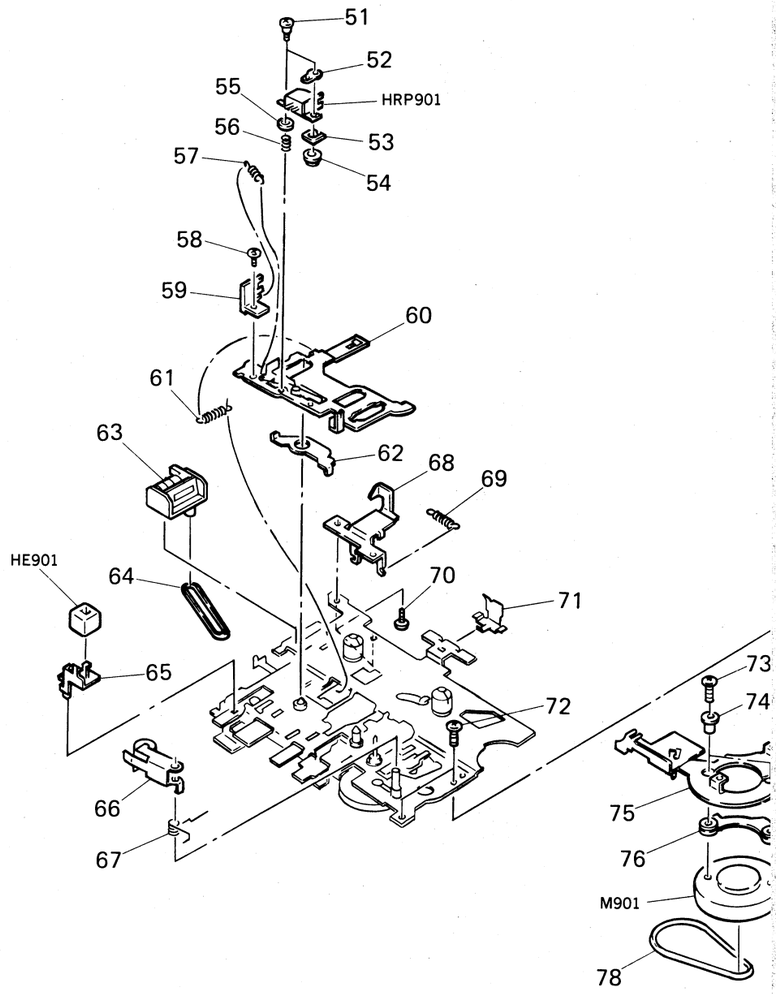
- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts Color

5-1. CABINET



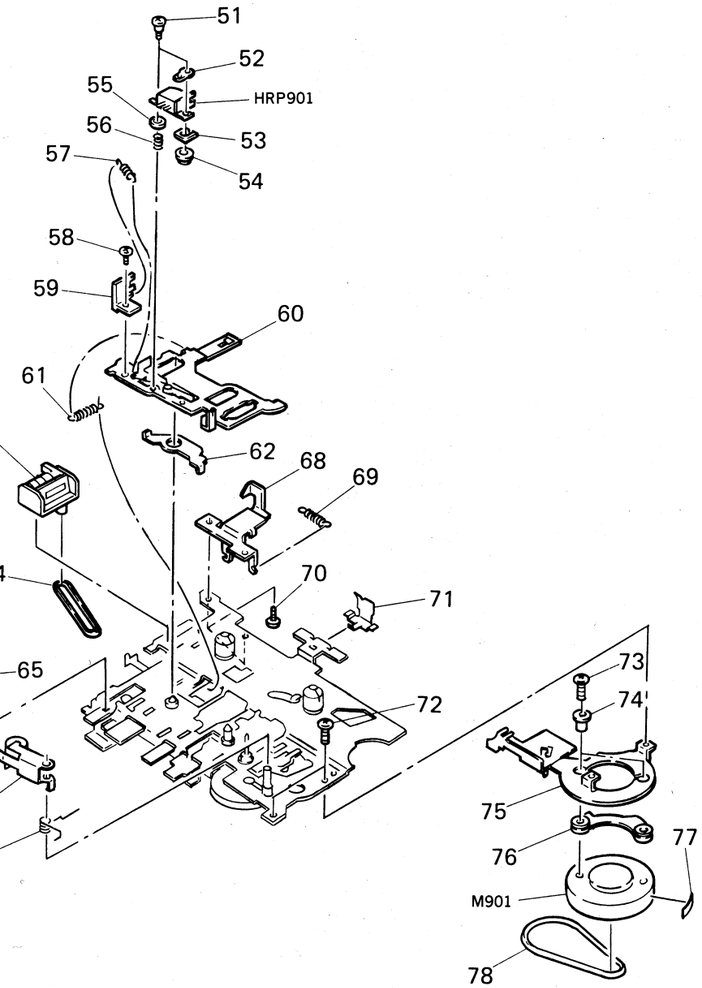
Ref.No	Part No.	Description	Remark
1	X-3318-247-1	LID SUB ASSY, CASSETTE	3
3	7-623-605-01	EYELET, 1.3X2.5	
4	X-3318-241-1	ORNAMENT ASSY, MICROPHONE	
5	3-831-441-XX	SPACER	
6	3-347-746-01	COLLAR	
7	*3-320-972-01	CUSHION (B), MICROPHONE	
8	*3-346-426-01	RETAINER (MICROPHONE)	
9	3-318-382-21	SCREW (1.7X3), TAPPING	
10	3-703-357-06	PIN, PARALLEL (DIA. 1.6X14)	
11	3-321-022-01	LEVER, EJECT	
12	3-318-215-01	SPRING	
13	*3-576-075-31	SHAFT, CASSETTE HOLDER	
14	*3-347-731-11	PLATE, BLIND	
15	3-318-204-91	SCREW (M1.7X4), TAPPING	
16	3-318-203-11	SCREW (B1.7X6), TAPPING	
17	3-318-204-71	SCREW (M1.7X5), TAPPING	
18	9-911-840-XX	SHEET, RUBBER	
19	X-3318-245-1	CABINET (FRONT) ASSY	10~12
20	3-329-169-01	SPRING, TORSION	
21	3-346-417-01	BRCKET (TOGGLE SPRING)	
22	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	
23	7-685-107-19	SCREW +P 2X12 TYPE2 NON-SLIT	
24	3-346-415-01	SPACER (STRAP)	
25	3-347-729-01	STRAP, HAND	
26	3-346-439-11	BUTTON (REC)	
27	3-346-437-11	BUTTON (PLAY)	
28	3-346-438-11	BUTTON (REW)	
29	3-346-435-11	BUTTON (FF)	
30	3-346-436-01	BUTTON (STOP)	
31	*X-3328-370-1	REINFORCEMENT ASSY	
32	3-318-202-51	SCREW (M1.4X6), TAPPING	
33	3-347-738-01	SCREW (M1.4X2.5), TAPPING	
34	3-346-420-01	SPRING	
35	3-831-441-11	CUSHION (B)	
36	3-346-418-01	TERMINAL BOARD, BATTERY	
37	9-911-815-01	CUSHION	
38	3-313-559-11	LID, BATTERY CASE	
39	3-342-512-11	SCREW (B1.7X3), TAPPING	
40	*3-346-414-01	BRACKET (SPEAKER)	
41	X-3318-246-1	CABINET (REAR) ASSY	42
42	3-331-603-01	FOOT	
43	3-318-203-31	SCREW (B1.7X8), TAPPING	
44	3-346-433-01	KNOB (VOR, PAUSE)	
45	3-346-434-01	KNOB (SPEED CONTROL)	
901	A-3015-775-A	MOUNTED PCB, MAIN	
902	1-626-840-11	PC BOARD, MICROPHONE FLEXIBLE	
MIC901	1-542-124-31	MICROPHONE, ELECTRET CONDENSER	
SP901	1-503-293-00	SPEAKER	

5-2. TAPE TRANSPORT MECHANISM (1) (MT-18-06)



Ref.No	Part No.	Description	Remark
51	3-318-240-01	SCREW (1.4), SPECIAL	
52	7-623-505-01	LUG, 2	
53	3-578-138-01	SHIM (t=0.1)	
53	3-578-138-11	SHIM (t=0.2)	
53	3-578-138-21	SHIM (t=0.3)	
54	3-318-309-01	SPACER, HEAD	
55	7-688-001-01	W 2, SMALL	
56	3-318-237-01	SPRING, COMPRESSION	
57	3-318-238-01	SPRING, TENSION	
58	7-627-552-87	SCREW,PRECISION P 1.7X2.2	
59	3-318-287-01	GUIDE, TAPE	
60	X-3328-358-1	CHASSIS ASSY, HEAD	
61	3-565-927-00	SPRING, TENSION	
62	*3-318-267-01	LEVER, CR	
63	1-548-541-31	COUNTER	
64	3-318-239-01	BELT	
65	3-318-285-01	BRACKET, ERASE HEAD	
66	A-3110-010-A	PINCH LEVER ASSY	
67	3-347-739-01	SPRING	
68	*X-3328-364-1	LEVER (ERASING PROT	
69	3-347-727-01	SPRING, TENSION	
70	7-627-852-37	PRECISION SCREW +P	
71	3-318-269-01	SPRING	
72	7-627-553-17	PRECISION SCREW +P	
73	7-627-852-17	+P 1.7X4	
74	3-325-385-01	SPACER, MOTOR	
75	X-3318-238-1	BRACKET ASSY	
76	3-347-702-01	CUSHION (MOTOR)	
77	3-831-441-XX	CUSHION	
78	3-347-753-01	BELT	
HE901	8-658-096-02	HEAD, ERASE EBF5-36	
HRP901	1-543-410-11	HEAD, MAGNETIC (REC	
M901	1-541-601-11	MOTOR	

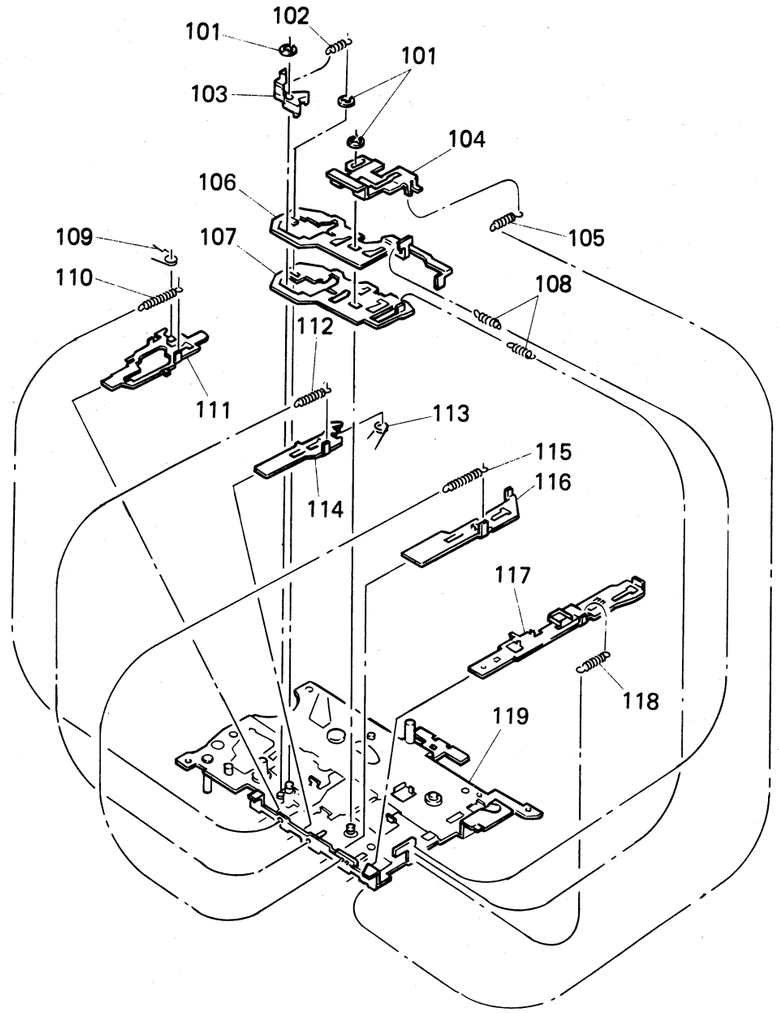
MECHANISM (1)



n	Remark
, SPECIAL	
)	
)	
)	
AD	
MPRESSION	
NSION	
CISION P 1.7X2.2	
E	
SY, HEAD	
NSION	
RASE HEAD	

Ref.No	Part No.	Description	Remark
66	A-3110-010-A	PINCH LEVER ASSY	
67	3-347-739-01	SPRING	
68	*X-3328-364-1	LEVER (ERASING PROTECTION) ASSY	
69	3-347-727-01	SPRING, TENSION	
70	7-627-852-37	PRECISION SCREW +P1.7X1.8TYPE3	
71	3-318-269-01	SPRING	
72	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
73	7-627-852-17	+P 1.7X4	
74	3-325-385-01	SPACER, MOTOR	
75	X-3318-238-1	BRACKET ASSY	
76	3-347-702-01	CUSHION (MOTOR)	
77	3-831-441-XX	CUSHION	
78	3-347-753-01	BELT	
HE901	8-658-096-02	HEAD, ERASE EBF5-36	
HRP901	1-543-410-11	HEAD, MAGNETIC (REC/PB)	
M901	1-541-601-11	MOTOR	

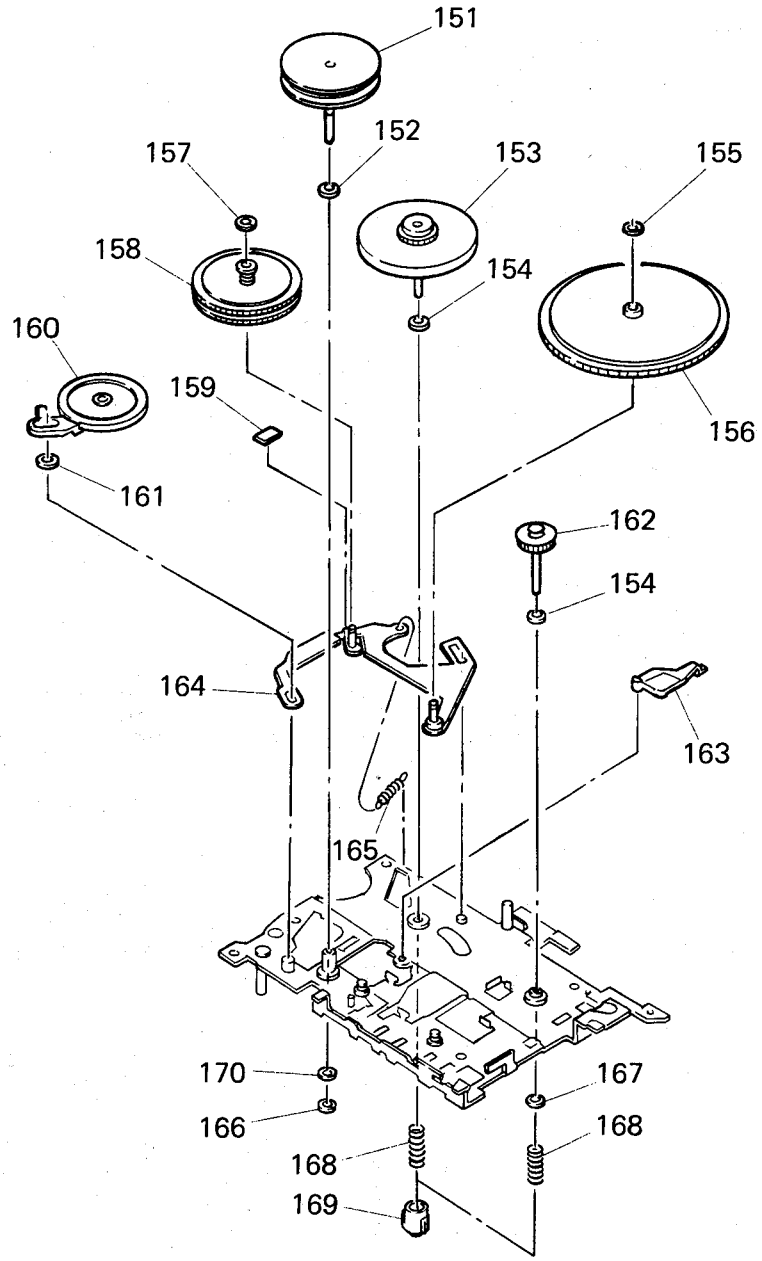
5-3. TAPE TRANSPORT MECHANISM (2) (MT-18-06)



Ref.No	Part No.	Description	Remark
101	7-624-101-01	RING, RETAINING E-1.2	
102	3-318-351-01	SPRING, TENSION	
103	3-318-296-01	LEVER, SHUT-OFF	
104	*3-318-293-01	LEVER, STOP	
105	3-547-669-00	SPRING, TENSION	
106	3-318-300-01	LEVER, SWITCH	
107	*3-318-294-01	PLATE, LOCK	
108	3-318-248-01	SPRING, TENSION	
109	3-318-276-01	SPRING	
110	3-318-250-01	SPRING, TENSION	

Ref.No	Part No.	Description	Remark
111	3-318-291-01	LEVER, FR	
112	3-318-251-01	SPRING, TENSION	
113	3-318-277-01	SPRING, REW	
114	3-318-292-01	LEVER, REW	
115	3-318-349-01	SPRING, TENSION	
116	*3-318-290-01	LEVER, PLAY	
117	*3-347-714-01	LEVER (REC)	
118	3-318-247-01	SPRING, TENSION	
119	*X-3328-360-1	CHASSIS ASSY, MECH, OUTSERT	

5-4. TAPE TRANSPORT MECHANISM (3)
(MT-18-06)



Ref.No	Part No.	Description	Remark
151	X-3328-357-1	FLYWHEEL ASSY	
152	3-701-437-31	WASHER	
153	X-3325-619-1	CLUTCH ASSY	
154	3-701-437-21	WASHER	
155	3-570-615-00	POLY-WASHER (DIA.1.2)	
156	3-318-265-01	GEAR (B), FR	
157	3-578-265-11	WASHER, STOPPER	
158	X-3318-207-1	GEAR (A) ASSY, FR	
159	3-831-441-XX	SPACER	
160	X-3328-344-1	LEVER ASSY, FWD IDLER	

Ref.No	Part No.	Description	Remark
161	3-827-323-11	WASHER (DIA. 3.1)	
162	X-3318-204-1	GEAR ASSY, REW	
163	3-318-288-01	ARM, FF	
164	X-3318-208-1	LEVER ASSY, FR	
165	3-347-752-01	SPRING, TENSION	
166	3-318-236-01	WASHER, POLY, SLIT	
167	3-325-690-01	WASHER, B.T	
168	3-318-241-01	SPRING, COMPRESSION	
169	3-332-002-11	CLAW, S REEL	
170	3-701-437-11	POLY-SLIDER (A)	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

Ref.No	Part No.	Description			
901	A-3015-775-A	MOUNTED PCB, MAIN			
902	1-626-840-11	PC BOARD, MICROPHONE FLEXIBLE			
		CAPACITOR			
C101	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C102	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C103	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C104	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C105	1-126-157-11	ELECT	10MF	20%	6.3V
C106	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C107	1-126-094-11	ELECT	4.7MF	20%	16V
C108	1-126-160-11	ELECT	1MF	20%	50V
C109	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C110	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
C111	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C112	1-126-153-11	ELECT	22MF	20%	6.3V
C113	1-126-157-11	ELECT	10MF	20%	6.3V
C115	1-135-145-11	TANTAL. CHIP	0.47MF	20%	25V
C116	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C117	1-131-394-41	TANTALUM	68MF	10%	3.15V
C118	1-126-157-11	ELECT	10MF	20%	6.3V
C119	1-126-153-11	ELECT	22MF	20%	6.3V
C120	1-126-157-11	ELECT	10MF	20%	6.3V
C121	1-126-153-11	ELECT	22MF	20%	6.3V
C122	1-126-153-11	ELECT	22MF	20%	6.3V
C123	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C124	1-124-434-00	ELECT	220MF	20%	4V
C125	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C126	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C127	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C128	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C129	1-124-431-00	ELECT	33MF	20%	4V
C130	1-163-015-00	CERAMIC CHIP	0.0033MF	10%	50V
C131	1-124-432-00	ELECT	47MF	20%	4V
C132	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C133	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C134	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	100V
C135	1-163-015-00	CERAMIC CHIP	0.0033MF	10%	50V
C136	1-124-432-00	ELECT	47MF	20%	4V
C137	1-135-145-11	TANTAL. CHIP	0.47MF	20%	25V
C138	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C139	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C140	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C601	1-126-153-11	ELECT	22MF	20%	6.3V
C602	1-135-070-00	TANTAL. CHIP	0.1MF	20%	35V
C701	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C702	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C703	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C704	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C705	1-135-157-21	TANTAL. CHIP	10MF	20%	4V
C706	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C707	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C708	1-126-160-11	ELECT	1MF	20%	50V
CN101	1-507-723-00	JACK, EXTENTION POWER (DC IN 3V)			

Ref.No	Part No.	Description			
D901	8-719-918-65	DIODE GL-1PR102			
HE901	8-658-096-02	HEAD, ERASE EBF5-36			
HRP901	1-543-410-11	HEAD, MAGNETIC (REC/PB)			
IC101	8-752-010-71	IC CX20107			
IC601	8-759-801-12	IC LA5523			
IC701	8-759-701-52	IC NJM2072M			
J101	1-563-319-21	JACK (MIC)			
J102	1-563-319-21	JACK (EAR)			
J103	1-507-933-11	JACK (REMOTE)			
M901	1-541-601-11	MOTOR			
MIC901	1-542-124-31	MICROPHONE, ELECTRET CONDENSER			
Q101	8-729-159-64	TRANSISTOR 2SD596			
Q102	8-729-805-25	TRANSISTOR 2SB1121			
Q701	8-729-100-66	TRANSISTOR 2SC1623			
Q702	8-729-900-98	TRANSISTOR DTC143TK			
Q703	8-729-900-98	TRANSISTOR DTC143TK			
Q704	8-729-100-66	TRANSISTOR 2SC1623			
		RESISTOR			
R101	1-216-045-00	METAL GLAZE	680	5%	1/10W
R102	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R104	1-216-045-00	METAL GLAZE	680	5%	1/10W
R105	1-216-041-00	METAL GLAZE	470	5%	1/10W
R106	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R107	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R108	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R109	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R110	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R111	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R112	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R113	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R114	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R115	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R116	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R117	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R118	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R119	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R120	1-216-025-00	METAL GLAZE	100	5%	1/10W
R121	1-216-306-11	METAL GLAZE	3.9	5%	1/10W
R122	1-216-306-11	METAL GLAZE	3.9	5%	1/10W
R123	1-216-035-00	METAL GLAZE	270	5%	1/10W
R124	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R125	1-216-009-00	METAL GLAZE	22	5%	1/10W
R126	1-216-037-00	METAL GLAZE	330	5%	1/10W
R127	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R128	1-216-013-00	METAL GLAZE	33	5%	1/10W
R130	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R131	1-216-009-00	METAL GLAZE	22	5%	1/10W
R133	1-216-041-00	METAL GLAZE	470	5%	1/10W
R601	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W

Ref.No	Part No.	Description			Remark
R602	1-216-084-00	METAL GLAZE	30K	5%	1/10W
R603	1-216-062-00	METAL GLAZE	3.6K	5%	1/10W
R604	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R605	1-216-076-00	METAL GLAZE	13K	5%	1/10W
R606	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R607	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R701	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R703	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R704	1-216-025-00	METAL GLAZE	100	5%	1/10W
R705	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
RV101	1-238-253-11	RES, VAR, CARBON 10K/10K (VOLUME/VOR SENS)			
RV601	1-238-378-11	RES, ADJ, CARBON 20K			
S101	1-554-745-11	SWITCH, SLIDE (REC/PB)			
S102	1-571-478-11	SWITCH, SLIDE (TONE/MIC SENS)			
S104	1-571-620-11	SWTCH, SLIDE (PAUSE)			
S105	1-554-297-00	SWITCH, LEAF (POWER)			
S601	1-570-386-11	SWITCH, SLIDE (SPEED CONTROL)			
S701	1-554-667-00	SWITCH, SLIDE (VOR)			
SP901	1-503-293-00	SPEAKER			
T101	1-433-251-00	TRANSFORMER, BIAS OSCILLATOR			
TH601	1-800-200-00	THERMISTOR			
TH602	1-807-193-11	THERMISTOR (POSITIVE)			

Ref.No	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
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	*3-329-138-01	CUSHION (UPPER)	
	*3-329-139-01	CUSHION (LOWER)	
	3-329-156-01	CASE, CARRYING	
	*3-329-157-01	INDIVIDUAL CARTON	
	3-570-631-61	BAG, POLYETHYLENE	
	3-750-447-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE)	
	3-750-447-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN)	